

- 34 -

CLAIMS

a6

1. A cold-storage appliance including:
- 5 an open-topped insulating container defining an external surface;
- an insulating lid adapted to close the open top of the container;
- 10 a cooling means adapted to cool the interior but not the exterior of the container;
- and
- a structure supporting the container, the lid and the cooling means;
- wherein the container is mounted to the structure for movement relative to the structure
- 15 and the lid to open the container and afford access to its interior or to close the container, and wherein at least a majority of the external surface of the container is exposed to ambient air when the container is closed by the lid.
2. The appliance of Claim 1, wherein movement of the container with respect to the
- 20 structure and the lid includes a major generally horizontal component of movement.
3. The appliance of Claim 2, wherein the container is mounted to the structure by means running along at least one generally horizontal track.
- 25 4. The appliance of Claim 3, wherein the track includes at least one rail.
5. The appliance of Claim 4, wherein the or each rail is telescopic.
6. The appliance of any of Claims 2 to 5, wherein the container is supported by wheels or
- 30 rollers running along a generally horizontal support surface.
7. The appliance of any of Claims 2 to 6, wherein generally horizontal movement of the

- 35 -

container is effected by opening a door of the appliance.

8. The appliance of any preceding Claim, wherein movement of the container with respect to the structure and the lid includes a minor generally vertical component of movement and wherein the container is mounted to the structure by means permitting said generally vertical movement.

9. The appliance of Claim 8, wherein the container lifts against the lid upon closing and drops away from the lid upon opening.

10. The appliance of Claim 8 or Claim 9, wherein the track or support surface includes a ramp effecting said vertical component of movement.

11. The appliance of any of Claims 8 to 10 and including crank means responsive to closing movement of the container to lift the container toward the lid.

12. The appliance of any preceding Claim, wherein closing movement of the container with respect to the structure and the lid wedges together the container and the lid.

13. The appliance of Claim 12, wherein a track or support surface supporting the container converges with the lid in the closing direction of the container.

14. The appliance of Claim 12 or Claim 13, wherein the lid is received and embraced by a rim portion of the container that squeezes the lid laterally when the container and the lid wedge together.

15. The appliance of Claim 14, wherein the lid and the rim portion are complementarily tapered.

16. The appliance of any of Claims 12 to 14, comprising holding means for holding the container wedged against the lid.

- 36 -

17. The appliance of Claim 3 or Claim 6, wherein the track or support surface is exposed to ambient air.
18. The appliance of any preceding Claim, further including a seal that seals the container to the lid when the container is closed.
19. The appliance of Claim 12, wherein the seal is compressible.
20. The appliance of Claim 18 or Claim 19, wherein the seal is of magnetic, hydraulic, or pneumatic type.
21. The appliance of Claim 20, wherein the seal is electro-magnetic.
22. The appliance of any preceding Claim, wherein opening movement of the container is against the force of gravity.
23. The appliance of any preceding Claim, wherein substantially all of the external surface of the container is exposed to ambient air when the container is closed.
24. The appliance of any preceding Claim, wherein the external surface of the container comprises a plurality of surface portions.
25. The appliance of Claim 24, wherein the surface portions are defined by bottom and side walls of the container.
26. The appliance of any preceding Claim, wherein the container is generally cuboidal.
27. The appliance of any preceding Claim and including a scraper or wiper means associated with the container to remove ice or water from the cooling means upon relative movement between the container and the lid.
28. The appliance of Claim 27 and including first and second scraper or wiper blades

- 37 -

arranged respectively to remove ice or water from the cooling means during opening and closing of the container.

29. The appliance of any preceding Claim and including a flexible membrane associated
5 with the cooling means and means for locally deforming the membrane to remove ice or water from the membrane upon relative movement between the container and the lid.

30. The appliance of any preceding Claim, wherein the cooling means is associated with
10 the lid.

31. The appliance of Claim 30, wherein the cooling means is integral with the lid.

32. The appliance of Claim 30 or Claim 31, wherein the cooling means is substantially
15 flush with the underside of the lid.

33. The appliance of any preceding Claim, further including shut-down means for shutting
down the cooling means when the container is not closed.

34. The appliance of Claim 33, wherein the shut-down means includes a switch closed by
20 presence of the container.

35. The appliance of any preceding Claim, wherein a retractable screen is extensible to
screen the cooling means when the container is open.

25 36. The appliance of Claim 35, wherein the screen is attached at one end to the structure and at an opposed end to the container or to means associated with the container.

37. The appliance of Claim 35 or Claim 36, wherein the screen is removably attached to
the means associated with the container.

30 38. The appliance of Claim 37, further including retaining means for retaining the screen in a wholly or partially extended configuration when the screen is detached from the

- 38 -

container.

39. The appliance of any of Claims 35 to 38, wherein the screen is exposed to ambient air when retracted.

5

40. The appliance of any of Claims 35 to 38, wherein the screen is furled on a roller when retracted.

41. The appliance of any of Claims 35 to 40, wherein the screen is heat-reflective.

10

42. The appliance of any of Claims 35 to 41, wherein a wiper or scraper is operable during retraction of the screen to remove water or ice from the screen.

43. The appliance of any of Claims 35 to 42, wherein the screen is biased into a retracted configuration.

15

44. The appliance of any preceding Claim, wherein the cooling means is adjustable so that the same container can be used to chill or to freeze.

20

45. The appliance of any preceding Claim, wherein the structure is a cabinet.

46. The appliance of any preceding Claim, wherein the structure is a frame.

47. The appliance of Claim 46, wherein the frame is adapted to be built-in between cupboards or other structures.

25

48. The appliance of any preceding Claim, wherein the structure defines at least one ambient air circulation channel around the external surface of the closed container.

30

49. The appliance of any preceding Claim, further including means for drawing in ambient air from the front of the appliance.

- 39 -

50. The appliance of Claim 49, wherein the structure defines a front panel including at least one opening for admission of ambient air.
51. The appliance of Claim 50, wherein the front panel further comprises control and/or display means.
52. The appliance of any preceding Claim, further including means for exhausting ambient air to the front of the appliance.
53. The appliance of any preceding Claim, further comprising an impeller for promoting admission and exhaustion of ambient air.
54. The appliance of any preceding Claim, wherein the container is removable from the structure.
55. The appliance of Claim 54, wherein an auxiliary lid is attachable to the container when removed from the structure.
56. The appliance of Claim 54 or Claim 55 when dependant from Claim 36 or from any Claim dependent from Claim 36, wherein the means associated with the container is a movable cradle adapted to receive the container.
57. The appliance of any preceding Claim, wherein the container can be moved with respect to the structure in a plurality of different directions to open the container.
58. The appliance of any preceding Claim, further comprising means for dividing the interior of the container.
59. The appliance of any preceding Claim and having a plurality of containers, each having an associated lid and cooling means.
60. The appliance of Claim 59, wherein the respective cooling means are independently

controllable.

- 5 61. The appliance of Claim 59 or Claim 60, wherein the cooling means are connected to a common refrigerator engine.
62. The appliance of any of Claims 59 to 61, wherein the containers are stacked one above another.
- 10 63. The appliance of any of Claims 59 to 62, further including means for preventing opening of a container when another container of the plurality is open.
64. The appliance of any of Claims 59 to 63, wherein the containers are of different interior sizes, shapes or volumes.
- 15 65. The appliance of any preceding Claim, further including viewing means to assist a user in viewing the contents of a container.
- 20 66. The appliance of Claim 65, wherein a viewing window is provided in the front and/or bottom of a container.
67. The appliance of Claim 65 or Claim 66 and including a viewing mirror positioned above the container to afford a reflected view from above the container into its open top.
- 25 68. The appliance of Claim 67, wherein the mirror is retractable when not in use.
69. The appliance of Claim 68, wherein the mirror is attached to the container.
70. The appliance of any of Claims 67 to 69 and having a plurality of containers, wherein the mirror is positioned above the containers to view the contents of any of the containers.
- 30 71. The appliance of any preceding Claim, further including a defrost tray positionable in the container below the cooling means.

- 5 72. The appliance of Claim 71, wherein the defrost tray includes a scraper or wiper means to remove ice or water from the cooling means upon relative movement between the container and the lid.
73. The appliance of Claim 71 or Claim 72, wherein the defrost tray includes an absorbent insert.
- 10 74. The appliance of Claim 73, wherein the insert is heatable.
75. The appliance of any preceding Claim, wherein the cooling means includes an evaporator exposed to the interior of the container when the container is closed.
- 15 76. The appliance of any preceding Claim, wherein the cooling means includes cold air ducts to feed cold air into the container when the container is closed.
77. The appliance of Claim 76, wherein the cold air is supplied by a fan coil circuit.
- 20 78. The appliance of any preceding Claim, wherein the cooling means is generally inclined or has locally inclined portions to promote drainage of moisture condensed thereon away from the interior of the container.
- 25 79. The appliance of Claim 78, wherein the cooling means communicates with ducts in the lid or the container for drainage of moisture away from the cooling means.
80. The appliance of any preceding Claim, and being embodied in a refrigerated vehicle application.
- 30 81. The appliance of Claim 80, and being embodied in a vehicle-mountable container.
82. A cold-storage appliance, substantially as hereinbefore described with reference to or as illustrated in any of the accompanying drawings.

Add
a87